TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/IPEA/416
B-4309-WO		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/CH2004/000577	14.09.2004	15.09.2003
International Patent Classification (IPC) or national classification and IPC		
B66C23/76, B66C23/68		
Applicant		
YERLI, Jean-Marc		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *(sent to the applicant and to the International Bureau)* a total of 1 sheets, as follows:

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))

      _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/CH2004/000577

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rule 12.3 and 23.1(b))

☐ publication of the international application (Rule 12.4)

☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-22 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

nos. 5 (in part), 6-18 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* 1-4, 5(in part) received by this Authority on 29.11.2005 with telefax

nos.* _____ received by this Authority on _____

☒ the drawings:

sheets 1/9-9/9 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/CH2004/000577

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims	4	YES
	Claims	1-3, 5-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. Documents

The following documents cited in the search report are mentioned in the present report. The numbering given below will be used throughout the rest of the procedure:

D1: EP-A-0 379 448 (POTAIN SA) 25 July 1990 (1990-07-25);

D2: WO 02 04336 A (YERLY JEAN MARC) 17 January 2002 (2002-01-17);

D3: DE 279 083 C (DEUTSCHE MASCHINENFABRIK AG) 9 October 1914 (1914-10-09);

D4: DE 289 839 C (KROSCHEL JOHANNES) 21 January 1916 (1916-01-21).

2. Inventive step

2.1 The present application does not fulfil the requirements set forth in PCT Article 33(1) because the subject matter of claims 1-3 and 5-18 does not involve an inventive step as defined in PCT Article 33(3).

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2.2 Document D1 describes (the references between parentheses apply to said document):

- load-hoisting and -handling plant with a slewing tower jib, including a tower with a slewing pivot, an articulated jib (9) including a jib foot of which the first end is pivotably connected to the top of said tower by means of a horizontal rotation shaft (19) positioned at the first end of said jib, a jib-derricking device (25, 26), and a jib-retaining assembly including a post (6), a jib-retaining sling (31) and a mobile counterjib ballast (8) coupled to said jib by means of said retaining sling and controlled in such a way as that it is moved along a variable-gradient guide track that supports said counterjib ballast (platform 7) and is positioned opposite said jib, wherein the variations in guide track gradient are selected in such a way that said counterjib ballast exerts a set of variable forces on both said jib and said plant structure and thereby contributes to plant equilibrium during jib extension and retraction travel in the articulated operation mode of said plant.

2.3 It should be noted that, even though the platform stringers are straight, the counterjib ballast travels along a curved path because the gradient of said platform varies (it pivots about a horizontal shaft 13) when the jib is moved closer

to the tower (see column 7 of the description and figures 2, 4 and 5). It follows that the counterjib ballast is controlled in such a way that it travels along a variable-gradient guide track.

2.4 Document D1 describes plant from which the plant disclosed in the subject matter of claim 1 differs by virtue of an articulated fly jib that is rotatably connected by means of a horizontal articulation shaft to the second end of said jib foot, by the shape of the guide track and by the fact that said guide track is rigidly connected to said slewing pivot.

2.5 The solution proposed in claim 1 of the present application is not considered to be inventive (PCT Article 33(3)), for the following reasons:

2.6 Such a minor modification to the construction of the jib described in D1 is routine practice to a person skilled in the art (see, for example, D2) and the resulting advantages are easily foreseeable.

2.7 Document D4 describes a crane that has an articulated jib (a) mounted on a slewing pivot, and a variable-gradient guide track (h) rigidly connected to said slewing pivot. It should be noted that the upper portion of said crane (Krangerüst c) is pivotably connected to the larger-diameter portion between "Krangerüst c" and

"Ponton k" by means of a vertical rotation shaft. The movement of the counterjib ballast (i) along said track is dependent on jib articulation so that the crane is in equilibrium during jib movement.

2.8 It follows that the feature whereby a variable-gradient guide track (h) is rigidly connected to the slewing pivot has already been used for the same purpose in similar plant. It would appear obvious for a person skilled in the art to use this feature with a corresponding effect in plant as per document D1.

2.9 In view of points 2.6-2.8 above, it would be a routine technical step for a person skilled in the art to combine all of the features disclosed in claim 1.

2.10 Dependent claims 2, 3 and 5-18 do not appear to contain any additional features which, in combination with the features of any one of the claims on which they are dependent, might define subject matter that fulfils the EPC requirement of inventive step, for the following reasons:

2.11 D1 discloses the additional features in claims 2 and 3.

2.12 Claims 5-8 suggest slight structural modifications to the plant described in claim 1. These modifications are routine practice to a person

skilled in the art and the resulting advantages are easily foreseeable. As a result, the subject matter of these claims does not appear to involve an inventive step.

2.13 The features in dependent claims 9-12 have already been used for the same purpose in similar plant (see D2, figure 15). It would appear obvious for a person skilled in the art to use these features with a corresponding effect in plant as per document D1 and thereby arrive at plant as per claims 8-10.

2.14 Claims 11-14 suggest slight structural modifications to the plant described in claim 1. These modifications are routine practice to a person skilled in the art and the resulting advantages are easily foreseeable. As a result, the subject matter of these claims does not appear to involve an inventive step.

2.15 It should be noted that document D2 discloses hoisting plant from which the plant in the subject matter of claim 1 differs in that a variable-gradient guide track, which is rigidly connected to the slewing pivot and supports the counterjib ballast, replaces the system of D1 in which the counterjib ballast is moved along a variable-gradient path by means of a pivoting counterjib ballast arm.

2.16 For the reasons already set out in points 2.6-2.8

above, it would be a routine technical step for a person skilled in the art to combine all of the features described in D2 and D4 and disclosed in claim 1. It follows that the subject matter of said claim does not appear to involve an inventive step with respect to these documents either.

2.17 Document D1, which is considered to be the closest prior art, describes load-hoisting and -handling plant that has a slewing tower jib. The plant disclosed in the subject matter of claim 4, in combination with claims 1 and 2 on which it is dependent, differs from the above in that the guide track has a sigmoidal cross section.

2.18 It follows that the subject matter of claim 4 is novel (PCT Article 33(2)).

2.19 The problem that the present invention is intended to solve can therefore be considered to be that of optimising the force exerted by the counterjib ballast.

2.20 The solution to this problem, as proposed in claim 4 of the present application, is considered to involve an inventive step (PCT Article 33(3)), for the following reasons:

2.21 The combination of features in claims 1 and 2 and 4 is not found in the prior art and cannot be derived in an obvious manner therefrom.